

METHOD AND APPARATUS FOR ENFORCING CAPACITY LIMITATIONS IN A LOGICALLY PARTITIONED SYSTEM

ABSTRACT

A method and apparatus for enforcing capacity limitations such as those imposed by software license agreements in an information handling system in which a physical machine is divided into a plurality of logical partitions, each of which is allocated a defined portion of processor resources by a logical partition manager. A software license manager specifies a maximum allowed consumption of processor resources by a program executing in one of the logical partitions. A workload manager also executing in the partition measures the actual consumption of processor resources by the logical partition over a specified averaging interval and compares it with the maximum allowed consumption. If the actual consumption exceeds the maximum allowed consumption, the workload manager calculates a capping pattern and interacts with the logical partition manager to cap the actual consumption of processor resources by the partition in accordance with the calculated capping pattern. To provide additional capping flexibility, partitions are assigned phantom weights that the logical partition manager adds to the total partition weight to determine whether the partition has exceeded its allowed share of processor resources for capping purposes. The logical partition thus becomes a "container" for the licensed program with an enforced processing capacity less than that of the entire machine.